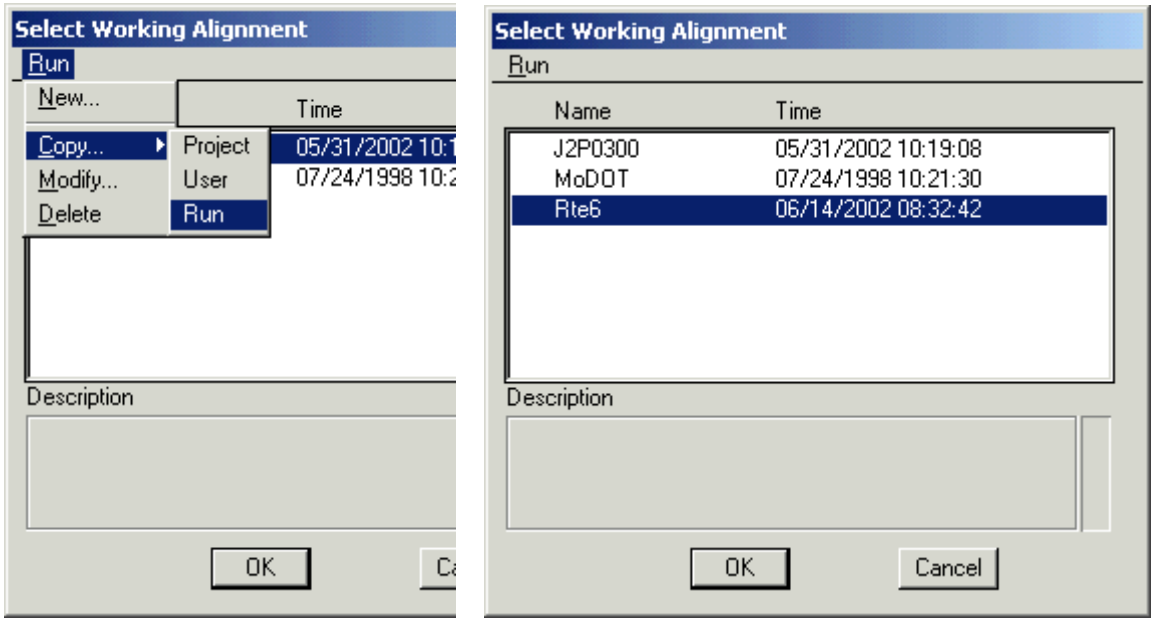
Exercise 11-1 This is a group exercise

1. Open the MicroStation file **t:\br-proj\a_geopak\d2\j2p0300\data\plan_j2p0300.dgn**.

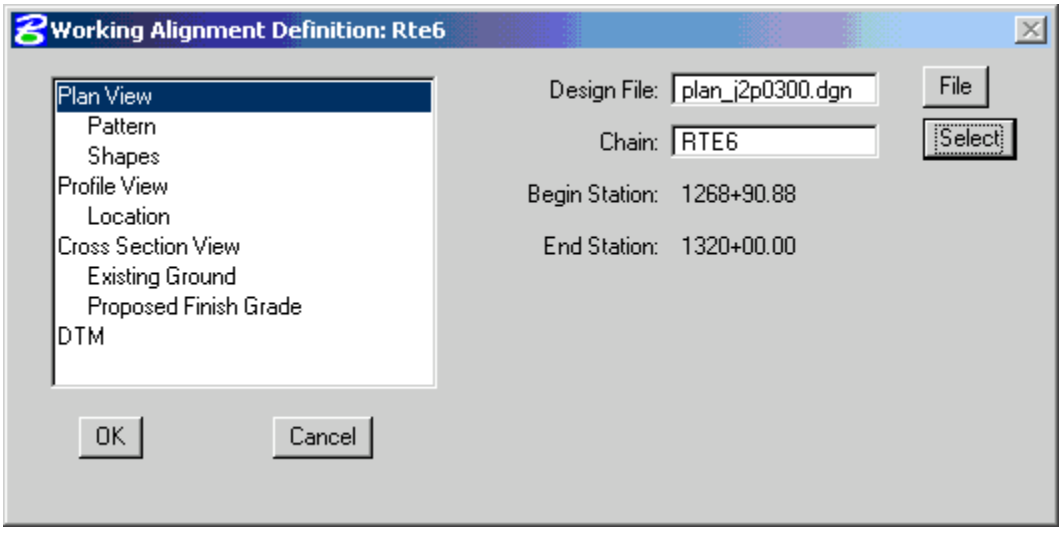
2. Open the project **j2p0300.prj** and enter **Road** as user **userc**.

   Copy the J2P0300 working alignment to **Rte6** and enter the Rte6 working alignment.



3. Enter the Rte6 Working Alignment Definition by clicking on **Define** in the Road Project dialog.

   Set the chain to **Rte6** in the Plan View section of the dialog as shown below.

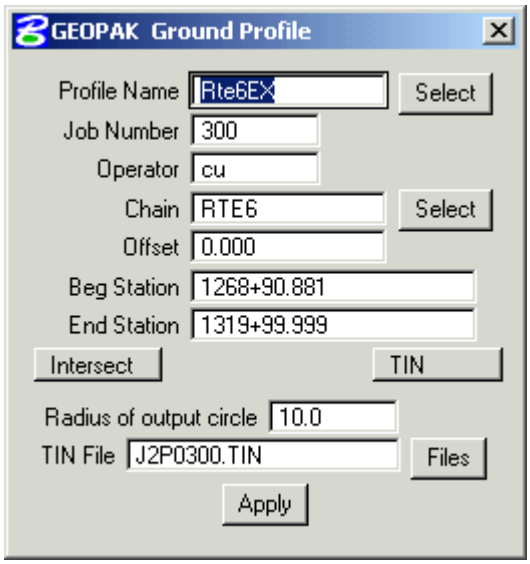


4. Choose **Existing Ground Profile** from the **Road Project** flow chart.

Copy the **MoDOT** run, name the new run **Rte6** and enter the new run.

5. Create an original ground profile for the project.

Profile Name:	**Rte6EX**.
Job Number:	**300**.
Operator:	**cu**.
Chain:	**Rte6**.
Offset:	**0**.
Beg. Station:	*Will be filled in when chain is chosen.*
End Station:	*Will be filled in when chain is chosen.*
Mode:	**Intersect** **TIN**.
TIN File:	**j2p0300.tin**.



6. Open the MicroStation file
t:\br-proj\a_geopak_\d2\j2p0300\data\profile_j2p0300.dgn.

Attach the file **t:\br-proj\a_geopak_\d2\j2p0300\data\plan_j2p0300.dgn** as a reference file, if it is not already attached, and fit the screen.

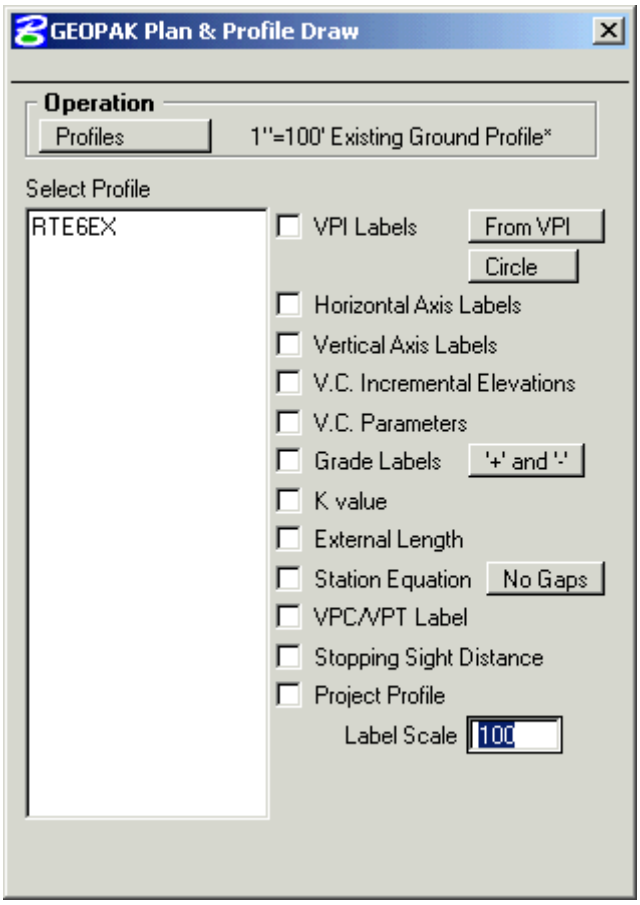
7. Plot the existing ground profile below the plan view geometry using **Design and Computation Manager** item **Drafting Standards \ Profile \ Existing Ground Profiles \ 1"=100' Existing Ground Profile**.

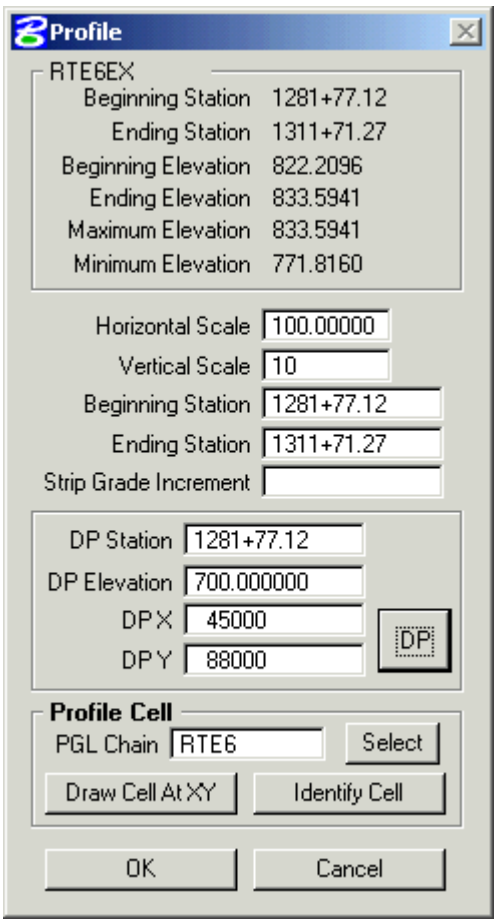
   Be sure all options are turned off, and the **Labeling Scale** is set to **100** as shown below in the figure on the left.

   Choose the profile **Rte6EX**, which will bring up the dialog shown below in the figure on the right.

   Set the following parameters

Horizontal Scale:	**100**
Vertical Scale:	**10**
DP Station:	**1281+77.12**
DP Elevation:	**700**
DP X and Y:	*Press **DP** and data point on the screen in an open area or enter values shown.*
PGL Chain:	**Rte6**

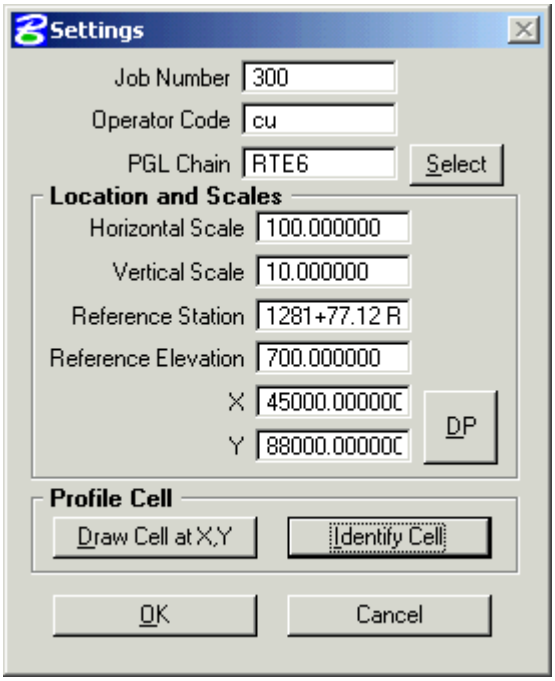




Press **Draw Cell At XY** and **OK** buttons to draw the profile cell and existing ground.

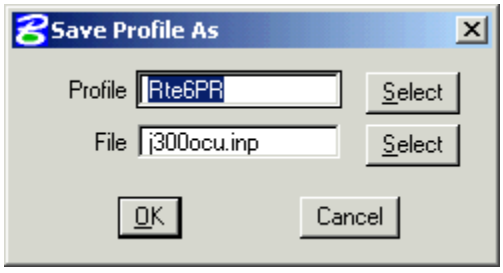
8. Use the **Vertical Alignment Generator** to create the following proposed profile with the given settings.

   With the **Identify Cell** button, choose the profile cell plotted previously. The dialog should fill in as follows.



VPI 1	Sta.:	1281+77.20	Fd Grade:	–6.40		
VPI 2	Sta.:	1285+35.00	Elevation:	799.50	Vertical Curve L:	600
VPI 3	Sta.:	1298+40.00	Elevation:	799.50	Vertical Curve L:	300
VPI 4	Sta.:	1306+80.00	Bk Grade:	–0.01	Vertical Curve L:	660
VPI 5	Sta.:	1311+70.00	Bk Grade:	6.80		

   Save the profile as **Rte6PR**.



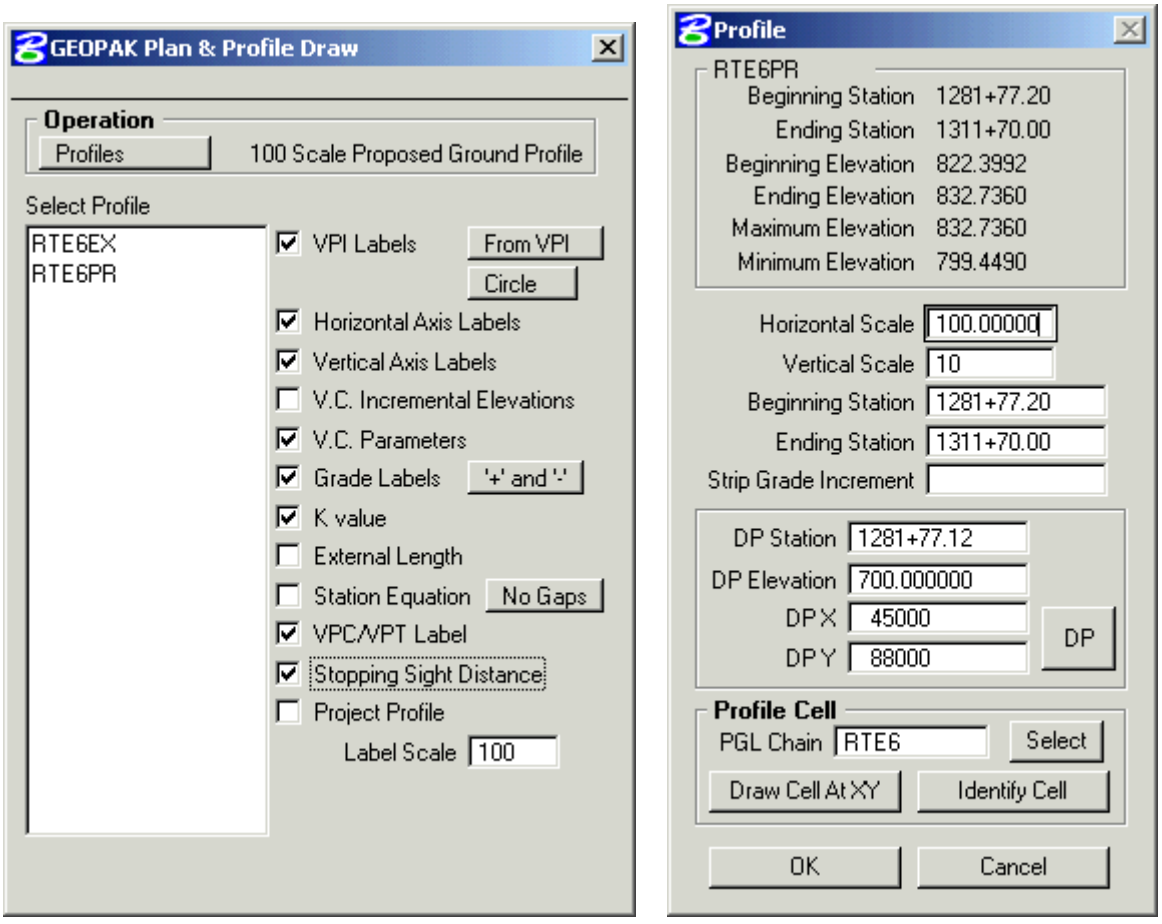
   Exist the Profile Generator. Do not save the profile since it was just stored, but save the vertical alignment settings.

9. Plot the existing ground profile using **Design and Computation Manager** item **Drafting Standards \ Profile \ Proposed Ground Profiles \ 100 Scale Proposed Ground Profile 1"=100' H & 1"=10' V**.

   Turn on the following options as depicted below in the figure on the left.

   VPI Labels
   Horizontal Axis Labels
   Vertical Axis Labels
   V.C. Parameters
   Grade Labels
   K Value
   VPC/VPT Label
   Stopping Sight Distance.

   Choose the profile **Rte6PR**, which bring up the dialog shown below in the figure on the right.

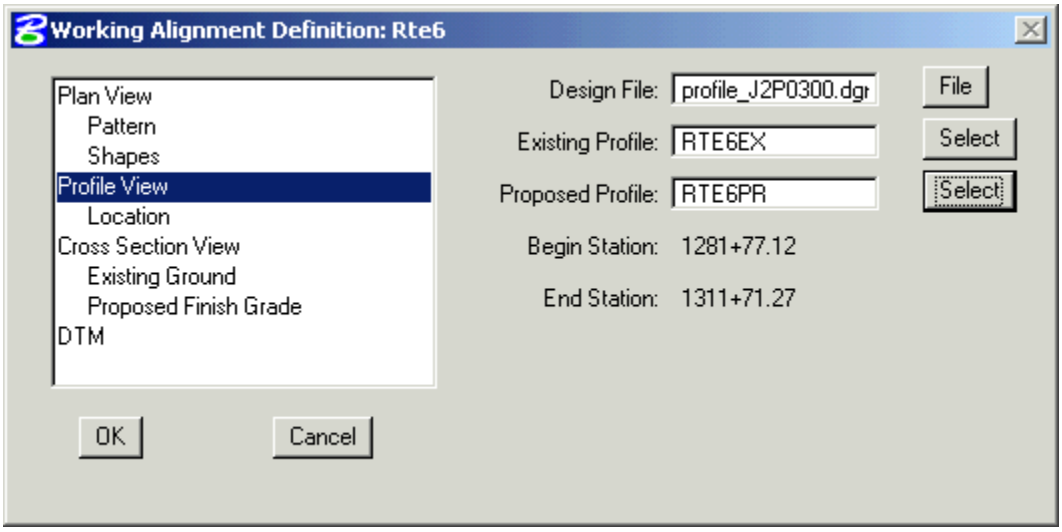


   Use the **Identify Cell** button in the dialog to select the profile cell placed earlier.

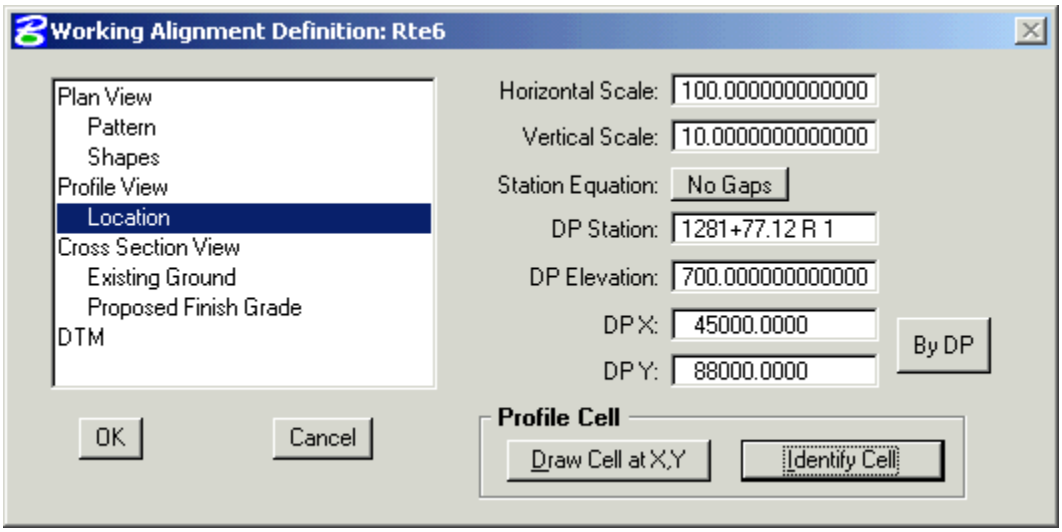
   Plot the profile **Rte6PR** by selecting the **OK** button. Close D&C Manager.

10. Complete the **Profile View** and **Location** sections of the **Rte6 Working Alignment**.

Existing Profile: **Rte6EX**
Proposed Profile: **Rte6PR**



For the **Location** section, use the **Identify Cell** button to choose the profile cell.



Accept the changes by clicking on the **OK** button.